

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An automatic detecting method for detecting ~~[[a]]~~ protocol nonconformity in a predetermined communication protocol, ~~transmitting and receiving control process~~, occurring in a communication between transmitting and receiving terminals that make at least one transmitting and receiving control process in accordance with a predetermined communication protocol, said method comprising:

receiving acquiring a packet to be transmitted or received in the communication between said transmitting and receiving terminals[[:]] to transfer the packet for data retention. if it is necessary to save the packet, and to transfer the packet for packet analysis, unless it is necessary to save the packet;

analyzing header information of the packet transferred from the receiving to transfer the header information and necessary payload information;

ealeulating creating state information, which is Transmission Control Protocol (TCP) .connection information regarding a transmitting and receiving state of [[said]] transmitting or receiving the packet to correspond to a result of transmitting and receiving control in accordance with said communication protocol, [[from]] based on the header information and the payload information

~~transferred from the analyzing; of a required kind of the packet, in an actual communication state;~~

~~estimating normal information of a case where the transmitting and receiving control process is normally performed with the header information and the payload information received from the creating;~~

~~storing beforehand nonconformity information beforehand featuring nonconformity in said at least one the transmitting and receiving control process[[]] the nonconformity information being any one of a conditional formula regarding the TCP connection information, a conditional formula regarding the header information of the packet, and a combination thereof; and~~

~~comparing the analysis result of the analyzing, the TCP connection information created by the creating, the normal information estimated by the estimating, and the nonconformity information stored by the storing state information calculated at the step of calculating and the nonconformity information obtained at the step of storing in order to detect the transmitting and receiving control process where said nonconformity has occurred, wherein:~~

~~the state information is Transmission Control Protocol (TCP) connection information, and~~

~~the nonconformity information is at least one of a conditional formula regarding the TCP connection information, a conditional formula regarding the header information of the packet, and a combination thereof.~~

2.-3. (Cancelled)

4. (Currently Amended) The automatic detecting method for ~~protocol~~ ~~nonconformity~~ according to claim 1 [[or 2]] , wherein the step of calculating further comprises updating said state information every time acquiring the packet, and the step of comparing further comprises comparing the latest state information updated at the step of calculating and said nonconformity information.

5. (Currently Amended) The automatic detecting method for ~~protocol~~ ~~nonconformity~~ according to claim 1 [[or 2]] , wherein the TCP connection information includes an evaluation value having at least one of a total number of transmitted packets, a total number of retransmitted packets, a total number of Selective ACKnowledgement (SACK) blocks, a minimum packet size, a throughput of a maximum retransmitted interval, and a round trip time up to receiving a response packet to the transmitted packet.

6. (Currently Amended) An automatic detecting apparatus for detecting [[a]] protocol nonconformity in a predetermined communication protocol, ~~transmitting and receiving control process~~, occurring in a communication between transmitting and receiving terminals that make at least one transmitting and receiving control process in accordance with a predetermined communication protocol, said apparatus comprising:

~~means for acquiring a packet receiving portion that receives a packet to~~
be transmitted or received in the communication between said transmitting and
receiving terminals ~~[[;]] to transfer the packet for data retention. if it is~~
~~necessary to save the packet, and to transfer the packet for packet analysis,~~
~~unless it is necessary to save the packet;~~

a packet filter/analysis portion that analyzed header information of the
packet transferred from the packet receiving portion to transfer the header
information and necessary payload information;

~~means for a connection information calculating portion that calculating~~
state information, which is Transmission Control Protocol (TCP) .connection
information regarding a ~~transmitting and receiving~~ state of ~~[[said]]~~ transmitting
or receiving the connection information regarding a packet to correspond to a
result of a transmitting and receiving control in accordance with said
communication protocol based on the header information and the payload
information transferred from the packet filter/analysis portion of a required kind
of said packet acquired by said ~~means for acquiring, in an actual communication~~
state;

a normal information estimating portion that estimates normal information of a
case where the transmitting and receiving control process is normally performed with
the header information and the payload information received from the connection
information calculating portion;

~~means for storing a nonconformity information saying portion that stores~~
beforehand nonconformity information ~~beforehand~~ featuring nonconformity in

~~said at least one~~ the transmitting and receiving control process ~~[[:]]~~ , the
nonconformity information being any one of a conditional formula regarding the
TCP connection information, a conditional formula regarding the header
information of the packet, and a combination thereof; and

means for comparing a nonconformity comparison determining portion
that compares the analysis result of the packet filter/analysis portion, the TCP
connection information created by the connection information calculating
portion, and the nonconformity information stored in the nonconformity
information saying portion ~~the state information calculated by said means for~~
~~calculating and the nonconformity information from the means for storing in~~
~~order to detect the transmitting and receiving control process where said~~
~~nonconformity has occurred.~~ ~~, wherein:~~

~~the state information is Transmission Control Protocol (TCP) connection~~
~~information, and~~

~~the nonconformity information is at least one of a conditional formula~~
~~regarding the TCP connection information, a conditional formula regarding the~~
~~header information of the packet, and a combination thereof.~~

7.– 8. (Cancelled)

9. (New) The automatic detecting apparatus according to claim 6,
wherein the TCP connection information includes an evaluation value having at
least one of a total number of transmitted packets, a total number of

retransmitted packets, a total number of Selective ACKnowledgement (SACK) blocks, a minimum packet size, a throughput of a maximum retransmitted interval, and a round trip time up to receiving a response packet to the transmitted packet.